

## **REMARKS/ARGUMENTS**

The Office Action was mailed in the present case on June 24, 2005, making a response due on or before September 24, 2005. Since this response is being submitted in a timely manner, no further fee is thought to be due at this time. If any additional fee is due for the continued prosecution of this application, please charge the same to Applicant's Deposit Account No. 50-2555 (Whitaker, Chalk, Swindle & Sawyer, LLP).

### **I. Objection to the Drawings:**

The Examiner objected to the drawings in that the longitudinal roller set 20 was not shown in Figure 2 and that element 19 was not mentioned in the Specification. The Examiner also pointed out the misspelling of the word "austenite" in Figure 4. Applicant has made the required drawing changes and replacement drawing sheets are attached as a part of this response.

### **II. Double Patenting- Claims 19 and 20:**

The Examiner has indicated that Claims 19 and 20 would be rejected on the basis of "double patenting" if Claims 15 and 17 were found to be allowable. Applicant has canceled Claims 19 and 20, as being unnecessary to further define the invention, in view of other amendments made in this response. Accordingly, the double patenting grounds of rejection should now be moot.

### **III. Indication of Allowable Subject Matter:**

Applicant appreciates the Examiner's indication of the allowability of Claims 15, 16 and 19 if rewritten in independent form including all of the limitations of the base claim and any intervening dependent claims. Applicant has canceled Claim 15, since the features of this claim have now been incorporated into independent Claim 10. Note that the only difference in amended Claim 10 and the scope of Claim 15 which the Examiner indicated to be allowable concerns the description of the preferred welding method utilized. Claim 10 has been amended to call for welding the formed body

along the longitudinal seam region using a “high frequency electric resistance” welding process to thereby produce a welded pipe. This language is thought to more precisely define the particularly preferred type of welding process. Support for this language is found at paragraph [0033] on pages 15 and 16 of the original Specification. Note also that amended Claim 10 is more specific than the previously indicated to be allowable Claim 15 in describing the preferred corrosion/erosion resistant stainless steel as a low carbon dual phase (ferrite plus martensite) stainless steel.

#### **IV. Remaining Substantive Claim Rejections-35 U.S.C. §102:**

The Examiner rejected Applicant’s original Claims 1, 4-14, 17-18 and 20-25 under 35 U.S.C. §102 as being unpatentable over U.S. Patent No. 5,820,703 to Suzuki, et. al. The Examiner rejected Applicant’s Claims 1-8 under 35 U.S.C. §102 as being unpatentable over U.S. Patent No. 6,379,821 to Kushida et. al.

The Examiner stated in the instant Office Action that the reason for the allowability of Claim 15 was that the “prior art does not teach or reasonably suggest a method of manufacturing a welded stainless steel pipe by using a high frequency induction welding technique wherein the stainless steel pipe is a low carbon dual phase (ferrite plus martensite) stainless steel.”

Remaining independent Claims 1 and 10 now include each of the features pointed out by the Examiner as being patentable with the exception that Claim 1 describes the welding process as being “an electric resistance welding technique” while Claim 10 describes the welding process as being “a high frequency electric resistance welding technique.” As such, the amended language of independent claims 1 and 10 are now thought to be essentially in line with what the Examiner earlier indicated to be allowable subject matter. There are also additional reasons why the remaining independent claims distinguish over the teaching of either Suzuki or Kushida.

With regard to the Suzuki reference (5,820,703), the stainless steel category taught in Suzuki is a mono phase austenite which is controlled cooled to obtain a substantial martensite structure. The Gandy stainless steel category is dual phase ferrite plus martensite. Each of remaining independent

claims 1 and 10 includes the specific limitation “wherein the corrosion/erosion resistant stainless steel is a low carbon dual phase (ferrite plus martensite) stainless steel.”

The Kaltenhauser Formula values for Suzuki’s martensitic chemistry are less than 7.5. The Kaltenhauser Formula values of Gandy’s dual phase chemistry must be within the range of 8 to 10.7 (see Applicant’s remaining claims 3 and 16). The chemistry factor having an MC value of “at least 0” detailed in the Suzuki patent will not fall within the range of “8 to 10.7” qualification of the Kaltenhauser Formula detailed in the Gandy disclosure. Another way of saying this is that the MC values taught by Suzuki are at least 0. The MC values of the Gandy chemistry are always less than 0.

With respect to the Kushida reference (6,379,821), the method taught utilizes a slower submerged arc welding method. The Gandy teaching utilizes a more economical, high speed, high frequency electric resistance welding method (Applicant’s Specification, paragraphs [0033] and [0034]).

The Kushida reference teaches the use of a relatively slow, single length UOE forming process. Applicant’s preferred process utilizes a more economical and faster continuous roll forming process. The Kushida process also utilizes costly filler metal while Applicant’s preferred process uses no filler metal. Finally, the SAW welding process taught in Kushida creates an undersirable heavy raised weld bead on the pipe OD and on the ID. Applicant’s ERW process creates a more desirable flush weld bead on the OD and on the pipe ID.

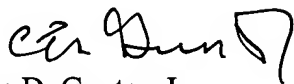
## **V. Conclusion:**

Based upon the above arguments and amendments, Claims 1,3, 7-10, 13-14, 16 and 21-25 are thought to be allowable over the art of record and an early notification of the same would be appreciated.

Please charge any additional required payment of fees for prosecution of the above-identified application to Deposit Account No. 50-2555 (Whitaker, Chalk, et al.)

Respectfully submitted,

Date: August 26, 2005

  
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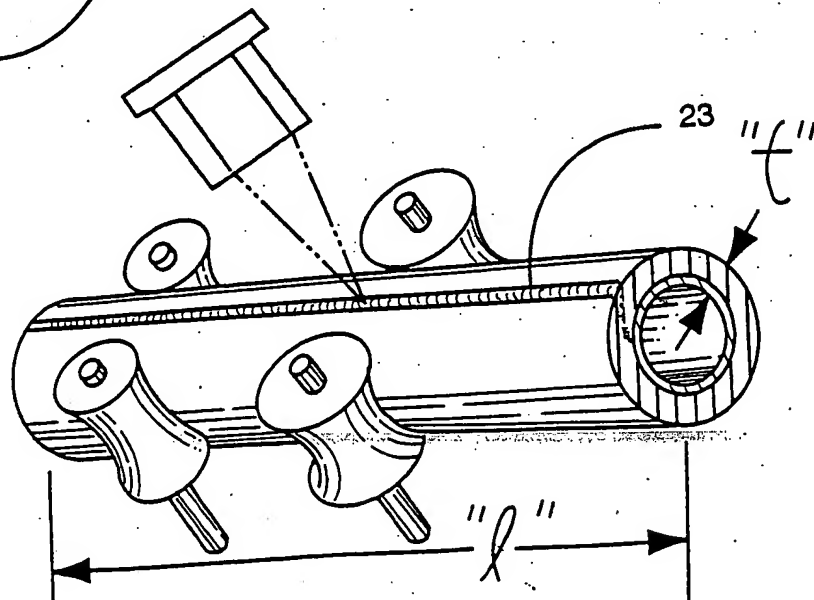
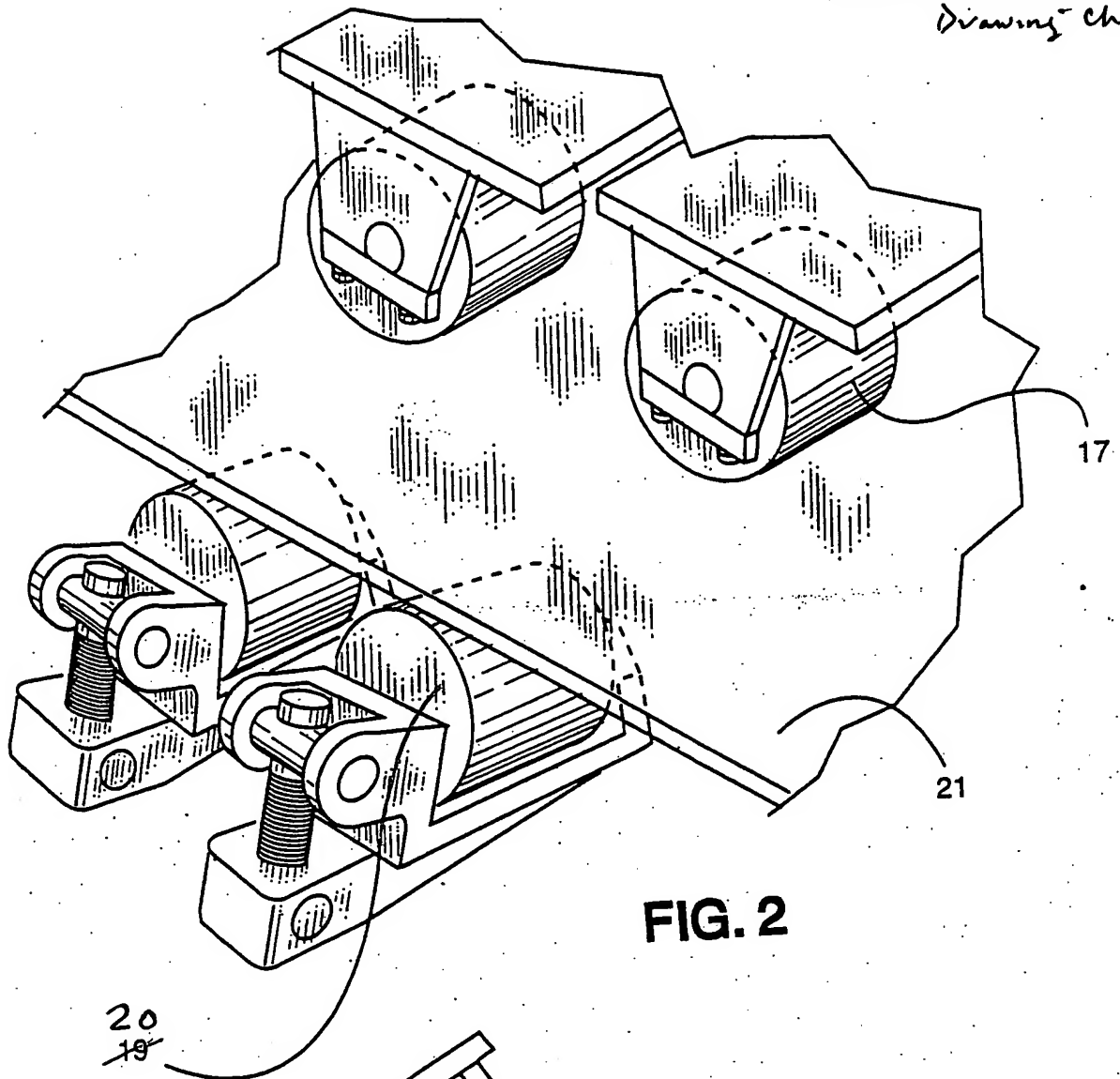
Attorney for Applicant(s)

**Amendments to the Drawings:**

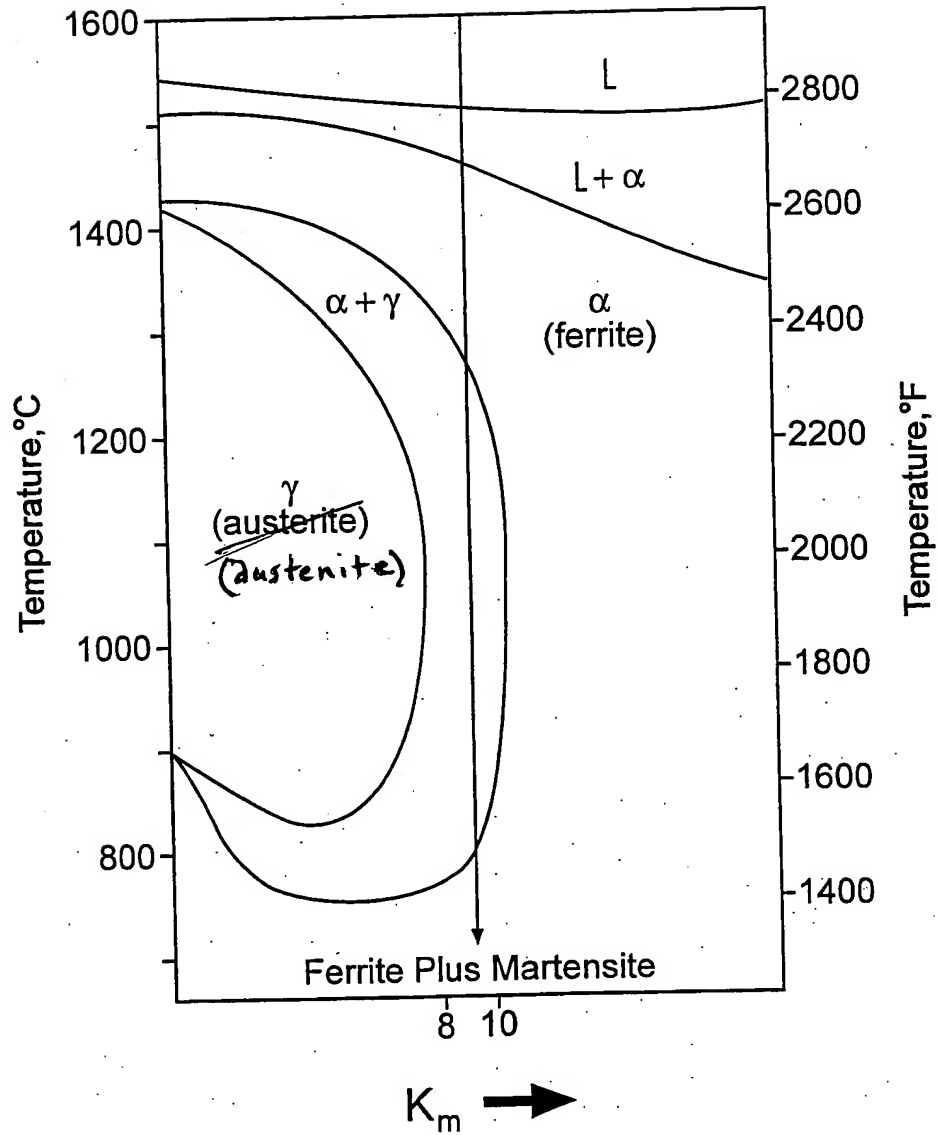
The attached two sheets of drawings include changes to Figures 2 and 4. These attached two sheets, which include Figures 2 and 4, replace the original sheets including Figures 2 and 4. In Figure 2, the number "19" referring to the lower roller set has been corrected to "20" so that the drawings agree with the language of the Specification as originally filed. In Figure 4, the spelling of the term "austerite" has been corrected to "austenite." Also attached are annotated sheets showing the drawing changes in red.

Attachment: Replacement Sheets  
Annotated Sheets Showing Changes

Appn No. 10/699,765  
Reply to Office action  
of June 24, 2005  
Annotated Sheet showing  
Drawing Changes



App'n no. 10/699, 765  
 Reply to Office Action of  
 June 24, 2005  
 Annotated sheet showing  
 drawing changes



Chemical Balance For Dual Phase Microstructure

$$K_m = \text{Cr} + 6 \text{ Si} + 8 \text{ Ti} + 4 \text{ Mo} + 2 \text{ Al} - 2 \text{ Mn} \\
- 4 \text{ Ni} - 40 (\text{C} + \text{N}) - 20 \text{ P} - 5 \text{ Cu}$$

Fig. 4